Migration, Gender and Sexually Transmitted Infections among young adults in Lesotho.

A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF SOCIAL SCIENCE, UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN THE FIELD OF DEMOGRAPHY AND POPULATION STUDIES FOR THE YEAR 2013.

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Declaration

I, Goitseone Manthata hereby declare that this research report is my own original work. It is being submitted to the Faculty of Humanities and Social Sciences, University of the Witwatersrand, Johannesburg. It is submitted in partial fulfilment of the requirement for the degree of Master of Arts in the field of Demography and Population Studies. I declare that to the best of my knowledge it has not been submitted before in part or in full for any degree or examination at this or any other University.

G.Manthata

29th June 2013

Dedications

With great humility and gratitude I would like to dedicate this research report to:

My parents – Barbara Lephina, Matthews Manthata and Thomas Madikoe Manthata,

My Grandparents – Phillip Matthews and Rebecca Matthews,

My Uncles – Goitseone Matthews and Jackie Nkoane,

My Brothers and Sister In-law – Khumoetsile Manthata, Sefenyiwe Manthata and Sibongile Manthata and Nephews – Lesedi Manthata and Khutso Manthata.

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Acronyms

AIDS Acquired Immunodeficiency Syndrome

ANCs Ante Natal Clinics

FC Field Coordinator

HDSS Health Demographic Surveillance Sites

HIV Human Immunodeficiency Virus

HPV Human Papilloma Virus

LDHS Lesotho Demographic Health Survey

LTFU Loss to follow up

MCP Multiple concurrent sexual partnerships

MDGs Millennium Development Goals

MoT Modes of Transmission

NSP National Strategic Plan

PDA Personal Data Assistants

IOM International Organisation for Migration

SADC Southern African Development Community

SSA Sub-Saharan Africa

STIs Sexually Transmitted Infections

UNDP United Nations Development Programme

UNFPA United Nations Population Fund

UNGASS The United Nations General Assembly Special Summit on HIV and AIDS.

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Chapter One

Introduction

1.1 Background

Globalisation has significantly increased human migration statistics amongst young adult populations (Oucho, 2006). In the demographic context, the effects of migration on population dynamics has been noted with fluctuations in fertility, morbidity and mortality ï by age and sex structure ï now occurring (Collinson, 2006). More specifically, the dynamics of migration are also central to concerns about the HIV/AIDS epidemic in Africa (Mberu and White, 2011).

Sub-Saharan African (SSA) constitutes the highest HIV/AIDS rates in the world (Barrett, 2007). However, the prevalence of the pandemic varies across different regions and amongst different population groups (Gracia-Calleja, *et al,* 2006). The Southern African region in particular has come to be known as the AIDS belt (Mberu and White, 2011). Most studies on migration and health in the Southern African region have emphasised HIV/AIDS, ignoring STIs despite evidence of their increasing rates amongst migrants and the increased chances of HIV infection amongst migrants who have experienced STIs (Buvé, 2000).

The presence of symptomatic STIs increases the risk of HIV transmission and therefore, treatment is likely to confer some protection against HIV infection (Lurie, 2003). Buve (2000) also found that STIs are among the most important co-factors in the transmission of HIV because of their high incidence and prevalence in many populations and because of their vulnerability to intervention, especially amongst migrant population groups. A study by Lurie (2003), done in South Africa, found that 25.9% of migrant men, in comparison to 12.7% of non-migrant men, were HIV infected. However, for their partners migration was not a significant risk factor for contracting HIV but, instead, having had an STI symptom (Lurie, 2003). Evidently, it is important that more studies trace factors which make population groups more susceptible to HIV/AIDS. And STIs deserve more attention in this regard, not only because of their high prevalence, but also because they frequently go undetected and directly result in morbidity and mortality (Blum, 2003).

Studies such as those done by Lurie (2003) in South Africa and Mberu and White (2011) in Nigeria have found a significant association between migration and STIs. In the Southern African region, migrant young adults and women are those most infected with STIs. In

Lesotho 4.08% of young adult females have had STIs in comparison to 3.77% young adult males (LDHS, 2009).

Lesotho, which is a small landlocked country in Southern Africa, has an increasing mortality rate (UNFPA, 2012). A possible contributing factor to increasing mortality rates could be attributed to the high prevalence of HIV. With 23.3% HIV infection among the adult population, Lesotho now has the third highest HIV/AIDS prevalence in the world (UNDP, 2009). Considering that STIs and HIV/AIDS prevalence are highest ï mostly among women ï and Lesotho being a highly migrant population at 60% (LDHS, 2009), there seems to be a connection between Migration, Gender and STIs that requires investigation.

This research report seeks to uncover how migratory trans-boundary relationships between South Africa and Lesotho influence and contribute to young adult migrants in Lesotho, having had any STI in the past year of the LDHS. Ultimately, this study aims to probe the association between gender and STIs amongst young adults in Lesotho.

1.2 Problem statement

In general the total STI prevalence in Lesotho is 6.38% and among female young adults in Lesotho STIs are at 4.08% (LDHS, 2009). With the country having the third highest HIV prevalence in the world (UNDP, 2009), and with the Basotho population being highly migrant (60%) (LDHS, 2009), migration in Lesotho could have a direct causal link to STIs. In a study done by Colvin and Sharp (2000) in Lesotho, they found that rates of STIs increased with the construction of the Katse Dam. Among other factors, the authors indicated that with the construction of new roads and increased transportation, Basotho people migrated more, and with this there was a significant increase in STIs (Colvin and Sharp, 2000). The majority of Lesothoôs young adult population have been pushed to migrate because of the countryôs low economic development, the global economic crisis (UNFPA, 2012) and high unemployment at 29% (UNFPA, 2012).

With the retrenchments of male labour from the South African Gold mines, migration trends have shifted to females being increasingly more migrant (Chaka, 2011). And as a result of low condom use among the Basotho people and multiple sexual partnerships being a way of life, this social norm renders them vulnerable to increased chances of having any STIs (Khobotlo *et al*, 2009). As noted by Blum *et al,* (2003), compared with extensive research on HIV/AIDS, very little attention has been paid to STIs.

1.3 Research Question

How do migration and gender contribute to STIs among young adults (15-39) in Lesotho?

1.4 Research Objectives

1.4.1 General Objective

- To examine the influence of migration and gender on STIs among young adults in Lesotho.

1.4.2 Specific Objectives

- To understand the historical trans-boundary relationship between Lesotho and South Africa and its influence on STIs.

- To describe the relationship between migration and STIs among young adult migrant groups in Lesotho.

- To understand the association between gender and STIs among young adult migrants in Lesotho.

1.5 Rationale

Historically labour migration in Lesotho was triggered by South Africaôs labour interests; at its peak Lesotho attracted (50%) of Lesothoôs male labour force to work in South Africa (Oucho, 2006). As a result of this, Basotho men would migrate alone, leaving their families behind, and would dwell in single-sexed hostels situated around the mines (Collinson, 2010). Due to separation from families and social networks which encouraged sexual webs, this led to multiple sexual partnerships becoming a way of life. (Khobotlo *et al*, 2009)

Migration separates families for long periods of time, both partners ï the one migrating and the one left behind ï often conduct sexual relations with multiple partners (Lurie, 2003). Furthermore, the fact that effective and sufficient public health services were not established, left migrant labour populations at higher risk of experiencing STIs (Wentzel and Tlabela, 2006).

Over the past 20 years however, migration trends within the country have changed considerably. Work opportunities for men in South African mines have decreased and female migration within and to South Africa has increased (Chaka, 2011). Despite the change in trends, the level of migration still remains high, and Lesotho was found to have the highest

rate of current multiple sexual partnerships out of 11 surveyed developing countries (Colvin and Sharp, 2000). In the case of Lesotho, it is women, more than five times that of men and sexually active young adults, who carry the burden of STIs (UNFPA, 2010). Due to the vulnerability to STIs of these two population groups, there needs to be a more specific focus on age and sex structure when discussing migration and STIs in Lesotho. This also brings to light that causal links related to migration and STIs are vast and intricate, from multiple sexual partners to age and sex structures.

Lastly, the dynamics of STI transmission is complicated through frequent movements between cities, towns and home villages (Mberu and White, 2011). Access to public health is never consistent within these spaces, which makes the symptomatic treatment of STIs and the access to preventative measures, such as condoms, difficult. In Southern Africa, the urban: rural ratio of STI prevalence is higher in the rural areas in comparison to East Africa (Garcia-Calleja, 2006). Stratifying by type of place of residence (Urban or Rural) and previous place of residence (Urban or Rural), provides a clearer indication of which areas need increased public health services.

1.6 Definition of terms

1.6.1 Migration The movement of young adults between urban and rural types of residence and between cities, towns and countrysides in Lesotho.

1.6.2 Gender Young adult women and men in Lesotho, whose gender roles have been defined through migration and their vulnerabilities to STIs as a result of multiple sexual partnerships and low condom use which are embedded in cultural norms.

1.6.3 STIs Having had and not having had any STI in the past 12 months of the 2009 Lesotho Demographic Health Survey (LDHS, 2009).

1.6.4 Young adults Women and Men aged 15-39 in Lesotho.

Chapter Two

Literature Review

2.1 Introduction

Migration and health concerns are becoming increasing focal points in the understanding of the HIV/AIDS pandemic in the African context. In the context of young adults, broader international trends which affect the region, such as globalisation, regional integration and network formations (Adepoju, 2007). These have contributed to the increase in young adult migration. Similarly, improved access to education and training opportunities have expanded into the enhanced employability of women and allowed for greater migrant possibilities (Adepoju, 2007).

The fact that these two population groups are subject to increased migration also makes them subject to increased STIs as migrants are always at a higher risk of infection. Spousal separation increases the risk of sexual networking in the sending area, increasing risk at both ends of a migration cycles (Collinson, 2010). Sexual networking, through migrant network formations are central to the transmission of STIs among migrants, however additional factors such as condom use and migration status need to be taken into account. The review that follows will thus explore literature on Migration, Gender and STIs.

2.2 Theoretical Frameworks

The Migration Transition Theory and the Push-Pull Theory

The Migration Transition Theory, which occurred historically in the context of economic development, is embedded in the Demographic Transition Theory (Weeks, 2005). According to the Theory, the centralisation of economic functions in cities has drawn migrants to cities for economic attainment (Weeks, 2005). Labour migration is one of the commonest migration types of economic development and constitutes the fastest growing form of migrants in the world, currently estimated at 86 million (UNFPA, 2004).

Furthermore, labour migration in the Southern African region can be described as circular. Migrant labourers leave their partners, families and communities in rural areas for economic attainment, while frequently maintaining strong social and economic ties, and returning periodically to their rural families and communities (Collinson *et al*, 2006). Circular labour migration was established over the past century by the South African mining industry and has become a central force shaping social structures in Southern Africa (Collinson *et al*, 2006).

Though economic attainment is the common driver for migration, there has to be a demand for migrant labour, and the Push-Pull theory accounts for how this occurs. The Push-Pull theory, like the Migration Transition Theory, is used to explain the drivers of migration. This theory states that some people move because they are pushed out of their location, whereas others move because they have been pulled or attracted to other locations (Weeks, 2005). More specific to the theory, is the notion that both areas of origin and destination are characterised by sets of positive factors, and forces of attraction or retention (pull factors), and negative factors, or forces of repulsion (push factors) (Zlotnik, 2006).

The Push-Pull Theory was developed in 19th-Century England, and is applicable in the Southern African context. Because Lesotho is completely landlocked by South Africa (Chaka, 2011), with only 10% of its land being suitable for arable agriculture, landlessness remains a dominant emigration pressure (Oucho, 2006). Pull factors for migration among the Basotho people can be located in its history with South Africa. During the period 1920-1990, virtually every country in the current Southern African Development Community (SADC) at one time or another sent migrants to work on South African mines (Wentzel and Tlabela, 2006). Employment in the mines worked as a pull factor for male migrants and also set off migration within Lesotho (Chaka, 2011).

In contemporary Lesotho, large scale retrenchments of males in South African mines (Crush, 2010) have altered the push-pull dynamics of Lesothoôs migratory patterns. Accordingly, the age and sex profile of Basotho migrants has been significantly reshaped. There are now more push factors for female migrants who need to provide for families in light of male retrenchments (IOM, 2010; Chaka, 2011). Additionally, there are also pull factors in the form of increasing preferences for female employees. This is particularly the case in sectors such as domestic services, commercial farming and the textile industries (Chaka, 2011). Due to the presence of both push and pull factors, female migration has increased exponentially.

For young adult men the construction sector and mining sector became a pull factor. The construction and mining sectors usually employ a significant number of young, male adult migrant workers between the ages of 18-35 (IOM, 2010). Construction is a project-based industry, meaning that workers are forced to constantly find new projects or are laid off and have to return home (IOM, 2010).

Drivers of migration do not occur in a vacuum and are often channelled through well-established migration networks that migrants have developed.

2.3 Trans-border relations between Lesotho and South Africa and its influence on STIs.

Migration networks can be defined as sets of inter-personal relations that link migrants or returned migrants with relatives, friends or fellow countrymen at home (Arango, 2000). A key characteristic of Lesotho and South Africa which enables these inter-personal links is the geographical positioning of Lesotho and South Africa. The heartland of Lesotho is the Free State province, which spans between South Africa and in neighbouring Lesotho (Mokoena, 1998). This geographical positioning of the Free State enables inter-personal relations to occur with ease and on a large scale, and as a result borders between the two countries appear to be fictitious. A key indicator of this is language: Basotho men often migrated to large cities in South Africa and spread Sesotho to the urban areas of South Africa (Edgecombe, 1982). The nature of the historical trans-boundary relationship between Lesotho and South Africa through migration networks of Basotho men migrating alone and residing in single-sexed hostels encouraged multiple sexual partnerships. Together with limited access to health care and prevention methods, this acted as a catalyst for increased STIs among this migrant population group.

According to Levine (1996), the ability to migrate requires more than merely financial considerations on behalf of the migrant as there must also be a willingness to leave family, friends, a familiar culture and language behind (Levine, 1996). Edmonston and Michalowski (2004), describe migration as equally complex. They find it important to consider factors such as sex, age, citizenship, mother tongue, duration of residence, occupation and education of the immigrant as central to the level of social and cultural integration. For Basotho men, their ability to integrate, socially and culturally into the South African context, was made easier due to strong migration networks enabled through borders which appeared fictitious and common language use. Their social norms pertaining to sexual behaviour were also carried with them, which can be identified in low condom use and multiple sexual partnerships (Khobotlo *et al*, 2009)**.** The nature of circular migration also enhanced the spread of STIs, which could also be understood as an attributing factor to increased STIs among young adult females in Lesotho. Limited access to public health services also prevented the early detection and treatment of STIs (Buvé, 2000).

Though migration networks lessen the ócostsô of migration, they also have significant drawbacks. In Lesotho, which has high levels of STIs, one such drawback is Sexual webs. Sexual webs refer to different types of sexual networks that often stem from social networks

(Timiun, 2012). In these groups, terms of agreement and beliefs about sex, characteristics and sexual activities amongst sexual partners, are often discussed and defined.

As noted by White (2003), the possibility is that migration may tend to reduce the risk of STIs by increasing exposure to sexual-health information and access to treatment and services. However, in the case of Lesotho, sexual webs do not appear to have this effect in relation to STIs. Instead, there is an increasing vulnerability and susceptibility to STIs amongst young adult single men (IOM, 2010) and young adult female migrants. This indicates a gap in existing studies pertaining to Migration, Gender and STIs, as sexual webs in Lesotho appear not to have the assumed effect indicated by White (2003). An understanding of the relationship between migration, gender and STIs among young adult migrants in Lesotho can enable a more contextualised understanding of factors associated with STIs among young adults in Lesotho.

2.4 The relationship between Migration and STIs among young adults in Lesotho

White (2009) also argues that the health and well-being of populations unfolds dynamically, often through a sequence of interrelated events. Similarly, the process of migration, which covers movements between rural and urban areas, exposes migrants to a myriad of interrelated events that are often detrimental to their overall sexual health.

White (2003) also hypothesised that in the context of rural-urban migration in Sub-Saharan Africa, migration may raise the risk of STI infection through multiple sexual partners, increasing contact with higher risk sex partners, such as commercial sex workers or clients, or increasing rates of sexual partners. However, Collinson (2010) brings a more detailed understanding of the nature of migration and STIs.

Collinson (2010) hypothesised that migrants, both male and female, are more exposed to high risk sexual behaviour and are therefore more likely to infect their spouses or regular partners on return. However he points out that migrants, who return home frequently, indicating closer links between migrant and rural households, may have less risk of outside partnerships and therefore less risk of becoming infected (Collinson, 2010). These findings demonstrate a need for greater understanding of the relationship between migration and STIs.

Nevertheless, multiple sexual partnerships remain a key contributing factor regarding migration and STIs. Lurie *et al,* (2003) found that 20% of migrant men had one or more casual partners in comparison to 6% of non-migrant men. Furthermore, according to Timiun

(2012), attitudes towards sexual behaviour have changed in response to socio-economic factors (poverty, education and employment). These factors regarding sexual behaviour increase the likelihood of STIs as they are associated with a larger number of sexual partners (Timiun, 2012), as young adults in Lesotho migrate as a result of high unemployment, which increases their likelihood of experiencing STIs as indicated in the high STIs among young adult females (4.08%). This can also be understood through female migrants earning a third of what their male migrant counterparts earn from Lesotho (Crush, 2010).

Barret (2007) also found that number of sexual partners and sexual mixing affected the spread of STIs. According to Jana *et al*, (2010), a research report on Multiple and Concurrent Sexual Partnerships in Southern Africa, reasons for multiple and concurrent partnerships (MCPs) in the region range from dissatisfaction in relationships, culture and social norms, money and material possession, and alcohol. The factors identified by Jana *et al*, (2010) are linked to the emotional destabilisation of young adult migrants. As a result of being separated from partners due to unemployment, this works as a catalyst to dissatisfaction in relationships with partners who are left behind, leading to relationships based on monetary gain and material possession for satisfaction.

An equally important factor to take into account regarding multiple sexual partnerships is that of condom use. Condoms can be highly effective in preventing the transmission of STIs during sex but must be used consistently to afford protection (Wilson *et al*, 2009). However, in Africa, condom use still remains closely associated with cultural norms, and gender inequality contributes to unsafe sexual behaviour. In Lesotho 65% of women agreed that husbands may not approve of condom use, even though the majority (91%) had heard about STIs, and 85% knew that condoms afforded protection against STIs (Colvin and Sharp, 2000). The impact of migration on relationships as a result of separation, dissatisfaction, high unemployment and significant wage disparities among female and male migrants, which lead to sexual relationships formed on monetary and material possession, present matters such as safe sexual practices through condom use, less important, and livelihood takes precedence.

Khobotlo (2009) found that multiple sexual partners are a part of the óway of lifeô of many Basotho. Multiple sexual partners are facilitated by labour migration which separates couples and steady partners, by multiple needs and wants of women, and perceptions that multiple sexual partners verify a manôs wealth, standing and manhood (Khobotlo *et al*, 2009). Nevertheless, condom use amongst men was found to be higher than amongst women, among

those aged 15-24, 57% and 48% of men and women respectively reported condom use at their last sexual encounter (Wilson *et al*, 2009). Often women assert this stereotype of masculinity to their detriment by believing that men have the right to refuse prevention methods such as condoms, and as a result more men use condoms than women.

2.5 The association between gender and STIs among young adults in Lesotho.

Historically, Lesothoôs low economic standing and its historical migrant labour relationship with South Africa, influenced migration trends within the country and externally, in a way that male labour migration became a significant source for livelihoods in the country. The decline in gold mine employment resulted in a diversification in patterns of labour migration as new migrants sort out other employment opportunities in post-apartheid South Africa (Chaka, 2011).

This shift in migration profile shows an increased level of young adult males and females migrating (Blum *et al*, 2003; Adepoju, 2007). Another noted shift is an increase in female migration to South Africa as female household members replace retrenched males and sort employment opportunities in sectors that prefer female employees, such as domestic work and commercial farming; there is also an increase in internal female migration (Chaka, 2011).

Furthermore, women are driven to migrate independently as a result of improved access to education and training, thereby enhancing their employability (Blum *et al*, 2003). In addition, Basotho female workers are also considered to be more docile and nimble by employers (Chaka, 2011).

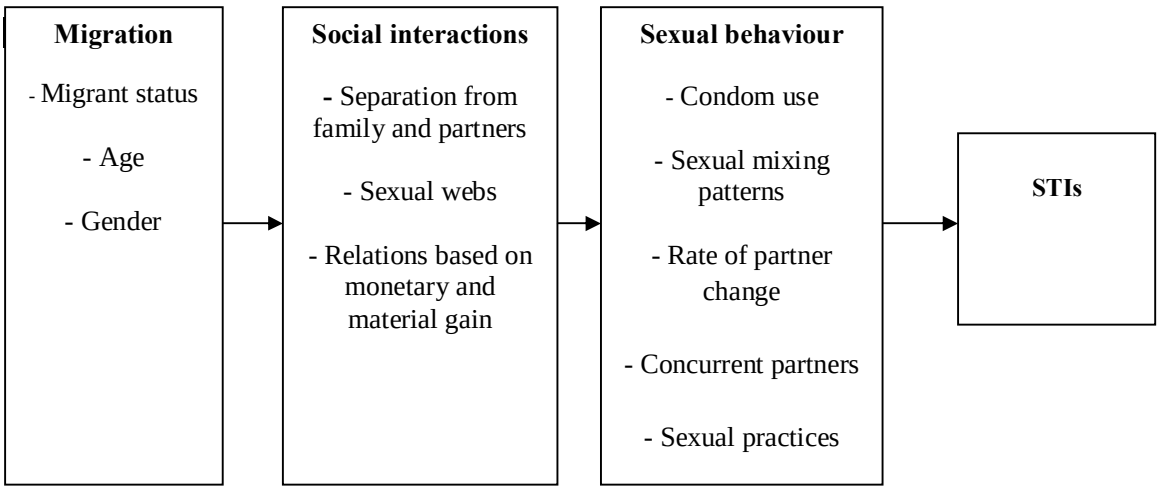
A sizable group of women now have the responsibility of being the head of the household and have to migrate in order to ensure the survival of the household (Crush, 2010). Yet though there has been a shift in gender roles pertaining to breadwinners, there has not been a change in traditional gender roles.

Basotho female domestic workers in South Africa earn significantly less than male miners, and thus tend to remit less to Lesotho (Crush, 2010). Hence, Basotho women appear to have little ground to contest gender roles and maintain the traditional norm of male decision-making in both household conduct and sexual practices (Colvin and Sharp 2000). As a result of the cause of migration amongst female young adults, and the remaining gendered roles in sexual behaviours, these factors have shown to result in higher STIs among young adult females in Lesotho.

2.6 Theoretical Framework

This report will refer to an adapted theoretical framework from Barnett and Whiteside (2003) as it accounts for the factors directly pertaining to migration, gender and STIs.

Figure 2.1 Adapted theoretical framework for migration, social interactions, sexual behaviour and STIs.



2.7 Hypotheses

There are two sets of hypotheses which this report sets out to test, which include:

Migration and STIs

H_o: There is no relationship between migration and STIs.

H_a: There is a relationship between migration and STIs.

Gender and STIs

H_o: There is no association between gender and STIs.

H_a: There is an association between gender and STIs.

2.8 Conclusion

The literature review, along with the theoretical framework, sought to understand the historical trans-boundary relationship between Lesotho and South Africa. The literature highlighted the nature of the relationship between the two countries, which was deeply

embedded in migrant labour for South Africaôs economic gain. It was found that the nature of migrant labour was such that it led to the disruption of family bonds. Inadvertently, the presence of migrant networks and sexual webs óencouragedô multiple sexual relationships and risky sexual behaviour. Studies show that multiple partners confound the effects of migration in sexual behaviour, hence the hypothesis is directional (Tamiru *et al*, 2011)**.** And this is a trend that continues in contemporary Lesotho where multiple sexual partnerships with low condom usage are the norm.

The literature also indicated that there are some gaps in studies pertaining to Migration, Gender and STIs. Few studies specifically focus on STIs, and most focus on HIV/AIDS. Data analysis on migration studies often neglect to speak to the socio-economic dynamics related to migration such as trans-boundary relationships between countries. This is important, particularly in the case of Southern Africa and migration and STIs, as the region has significantly higher levels of STIs in comparison to other countries in Sub-Saharan Africa. Regarding gender and migration, studies need to bring forward the intricacies faced by female migrants, which would enable a better scope and understanding of the challenges faced by female migrants, specifically pertaining to their health. The report will now proceed to discuss the methodology used to test the two sets of hypotheses.

Chapter Three

Methodology

3.1 Introduction

This chapter discusses the data sources used, the study design utilised, the study population referred to, and the sample size. It also addresses the specific questionnaires used, training, fieldwork, and data processing. It also provides definitions of the variables used, ethical considerations, data management, data analysis and the instruments used for data analysis.

3.2 Study design

The research report is based on a cross-sectional secondary data analysis. The data analysis is of the 2009 Lesotho Demographic and Health Survey (LDHS) which provides the most recent and nationally representative estimates of basic demographic and health indicators in Lesotho. The LDHS was used as it had statistically representative information on Lesotho as a whole.

3.2.1 Type and sources of data

The 2009 Lesotho Demographic Health Survey provides countrywide, population-based information on migration, STIs, age and sex structures, marital status, cohabitation, highest educational level, occupation, wealth index, condom used at last sexual inter-course, and seeking medical advice on STIs.

The sampling frame was selected from the 2006 population in two stages. It was designed to produce separate estimates for four different key indicators: (1) The country in its entirety, (2) urban and rural areas, (3) the four ecological zones, and (4) each of the ten districts in Lesotho (LDHS, 2009). The study obtained detailed information on behaviour regarding the transmission of STIs.

3.2.2 Study population

This research report was interested in young adult women and men aged 15-39. The findings of both migrants (Rural-Rural, Rural-Urban, Urban-Urban and Urban-Rural migrants) and non-migrants (Rural non-migrants and Urban non-migrants) were examined. The study populations age at first sexual intercourse as well as having had and not having had any STIs during the past 12 months of the 2009 LDHS were also inclusion criteriaôs

Therefore the inclusion criteria were based on age, age at first sexual intercourse, migrant status and having had and not having had any STI in the past 12 months in which the 2009 LDHS was carried out. To ensure that the study population was representative of the aims of this research, data were used from the individual questionnaires for women and men, extracted from the household questionnaire.

3.2.3 Sampling methods and sample size

The Bureau of Statistics (BOS) staff conducted an exhaustive listing of households in each of the LDHS clusters from July through December 2009. From these lists, a systematic sample of households was drawn for a total of 10,000 households, about 25 households on average per cluster. All women aged 15-49, identified in the entire sample of households, were eligible for individual interviews. In addition, half of these households (5,000) were selected randomly, and in these households all men aged 15-59 were eligible for individual interviews.

The survey is representative of 7,624 women aged 15-49, and 3,317 men aged 15-59, from 9,391 households covering 400 sample points (enumeration areas) throughout Lesotho. According to the 2006 Population and Housing census, the total population of Lesotho was 1,876,633, of which 23% live in the urban areas. For this report the sample used was inclusive of all young adults (15-39) who were migrants and non-migrants (N=6,270), and those who were sexually active and, had had and had not experienced any STIs (N=6,257).

3.3 Data collection methods

The LDHS utilised three types of questionnaires: the Household Questionnaire, the Womenôs Questionnaire, and the Menôs Questionnaire, the latter two making up the individual Questionnaires, which were appended for data analysis for this research report.

The Household questionnaire was used to list all the usual members and visitors to the selected households. Basic information was collected on the characteristics of each person listed, including age, sex, education and relationship to household. The Household Questionnaire was also used to identify persons eligible for the individual interviews.

The individual interviews for women and men consisted of questions pertaining to their background characteristics (age, education and employment), marriage and sexual activity, and STI related knowledge, attitudes and behaviour. A total of 9,994 households were

selected for the sample, of which 9,391 were successfully interviewed, yielding a household response rate of 98%. The response rate for the womenôs questionnaire was also 98% and for the menôs 95%. The contents of the questionnaires were based on standard questions developed for the MEASURE DHS programme.

The Household Questionnaire was used to list all the usual members and visitors to the selected households. Basic information was collected on the characteristics of each person listed, including age, sex education, and relationship to the head of the household. The Household Questionnaire was also used to identify persons eligible for the individual interview.

The Individual Questionnaires were used to collect information on background characteristics (age, education, employment, religion, etc.), marriage and sexual activity, husbandôs/wifeôs background, the womanôs/manôs work status, and STI related knowledge, attitudes and behaviour.

3.4 Quality control measures

A total of 109 persons, 34 males and 75 females, were trained to be the 2009 LDHS field staff. The training followed the standard DHS training procedures and included instructions on how to conduct interviews and how to fill in all three questionnaires. Classroom demonstrations and practice in administering the questionnaires using both paper questionnaires and PDAôs were used. The participants also practiced interviewing in actual households and their field experiences were discussed in class.

All participants also received extensive classroom training plus additional field practice on biomarker data collection. They also learned how to use informed consent procedures on how to collect finger prick blood spot samples for STI and HIV testing, and how to handle and package dried blood spots. They also received instruction on universal precautions and the disposal of hazardous waste.

3.4.1 Data Processing

Field work for the 2009 LDHS commenced on 16th October 2009 and was completed on 26th January 2010. Data collection was carried out by 15 interviewing teams, each consisting of one supervisor, one field editor, three to four female interviewers, and one or two male

interviewers. There were also three field coordinators (FC). The FC teams supervised and monitored the data collection teams throughout the fieldwork period.

Collected data were transferred from the interviewerôs PDA to the team supervisorôs at the end of each day. During visits from the FC teams, data files were transferred from the supervisorsô PDAs to the FCsô PDAs. Blood samples were also collected during these visits and transferred to the Lesotho Blood Transfusion Service (BLTS) laboratory.

All data files for the LDHS were stored in a computer at The Ministry of Health and Social Welfare (MOHSW) Headquarters. The data processing operation included secondary editing, which involved checking for inconsistencies.

The LDHS data entry and editing programmes used CSPro, a computer software package specifically designed for processing survey data such as that produced by DHS surveys. Data processing commenced in November 2009 and was completed in February 2010. After the LDHS survey instruments were drafted, they were translated into and printed in Sesotho for pre-testing.

3.5 Variable Definitions

3.5.1 Key Independent Variables

The key independent variables were Migration status and Gender. The 2009 LDHS had no direct questions pertaining to Migration status. Nevertheless there were questions on previous place of residence, current place of residence, duration of stay in current residence, and type of previous and current places of residence (rural or urban: city, town or countryside).

This research followed the same methods as Mberu and White (2011) to create the Migration status variable. Using responses to the questions above, migrant status, origin and destination of respondents were determined. Six migrant group categories were created: Rural and Urban Non-migrants, Rural-Rural Migrants, Rural-Urban Migrants, Urban-Urban Migrants and Urban-Rural Migrants. Non-migrants were young adults who always resided in their current place of residence and therefore had no previous residence. Migrants were those who moved to current place of residence from a different previous place of residence. This was confirmed by information on duration of stay in current place of residence and whether the previous

place of residence was a city, a town or in the countryside. As in Mberu and Whiteôs (2011) study, visitors were not included.

For statistical analysis, gender is referred to as the sex of the respondents (woman or man). The theoretical element of this report however, has noted that the sex of the respondents is also linked to cultural norms surrounding sexual behaviour, such as multiple sexual partnerships and condom use. Gender is coded *0* if male and *1* if female.

3.5.2 Other predictor variables

The demographic variables which were used were ñfive year age groupsò, ñmarital statusò and ñCohabitationò. Socio-economic variables were ñtype of residenceò, ñhighest educational levelò, ñprevious type of residenceò and ñwealth index and occupationò. Sexual practices variables were ñage at first sexual intercourseò, ñlast intercourse used condomò and ñseek medical advice on STIsò.

3.5.3 Demographic variables

ñFive year age groupsò: certain age groups, like primary school children show very low levels of migration, whereas young adults (15-39) in their prime are most likely to migrate (Collinson, 2009). Regularities in the age pattern for migration also reflect underlying biological, psychological and socio-cultural forces that govern behaviour (Collinson, 2009).

ñMarital statusò refers to the type of relationships the respondents were in. ñNever marriedò were those who never married, ñcurrently marriedò were those who were married and those who lived with their partners, and ñformerly marriedò were those who were widowed, divorced or separated.

ñCohabitationò referred to respondents who were living with their partner and those who did not stay with their partners.

3.5.4 Socio-economic variables

ñType of residenceò refers to the current residence the respondents resided in.

"Highest level of educationò refers to the highest level of education the respondent attained. The categories are no education, primary, secondary and higher education.

ñPrevious type of residenceò refers to the origin of the migrant. It ascertains whether they originated from a city, town or the countryside.

ñWealth indexò refers to the wealth group the respondent falls in. It ascertains whether they fall into poor, middle or rich wealth categories.

ñOccupationò refers to the type of labour the respondent engages in. Those in white collar jobs are skilled workers through training and educational attainment, and those in blue collar jobs are either semi-skilled or unskilled (LDHS dictionary, 2009).

Sexual practices variables

ñAge at first sexual intercourseò: 15-20, 21-26 and 27-37

ñLast intercourse used condomò: no and yes

ñSeek medical advice on STIò: no and yes

3.5.5 Dependent variable

This report focused on only one binary outcome variable which was STIs. This variable was created by respondents being asked whether they had not or had had any STI in the last 12 months (LDHS, 2009).

Table 3.1 Definitions of the key independent variables and the demographic variables

Variables	Definitions
Independent	
Key	
Migration Status	Rural non-migrants (1) Rural-rural migrants (2) Rural-urban migrants (3) Urban-urban migrants (4) Urban-rural migrants (5) Urban non-migrants (6)
Gender	Male (1) Female (2)
Demographic	
Age groups	15-19 (1) 20-24 (2) 25-29 (3) 30-34 (4) 35-39 (5)
Marital status	Never married (0) Currently married (1) Formerly married (2)
Cohabitation	Living with partner (1) Staying away (2)

Table 3.2 Definitions of the socio-economic variables, the sexual practice variables and the outcome variable

Variables	Definitions
Socio-economic	
Type of residence	Urban (1) Rural (2)
Previous residence	Urban (1) Rural (2)
Highest educational level	No education (0) Primary (1) Secondary (2) Higher (3)
Occupation	White collar (1) Blue collar (2)
Wealth index	Poor (0) Middle (1) Rich (2)
Sexual practices	
Age at first intercourse	15-20 (1) 21-26 (2) 27-37 (3)
Last sexual intercourse condom used	No (0) Yes (1)
Sought medical advice on STI	No (0) Yes (1)
Outcome	
STI	No (0) Yes (1)

3.6 Ethical considerations

As this study entailed secondary data analysis of the 2009 LDHS, which kept the respondents anonymous by not disclosing their personal information and names, as well as having being reviewed by the Research and Ethics Committee at the Ministry of Health and Social Welfare and by the ICF Macro Institutional Review Board (IRB), this research can be considered to have been highly ethical.

3.7 Data management

The 2009 LDHS was downloaded from the Measure Demographic and Health Survey, website: www.measruredhs.com. The data was presented in STATA format, and STATA 12 was used for analysis. From the downloaded data sets, variables relevant to this study were identified, the same variables were chosen in the womenôs and menôs questionnaires. Once the same variables were identified, the data sets were appended into one data set. The 2009 LDHS was fairly thorough and therefore required little cleaning.

3.8 Data analysis

In order to achieve the objectives of the report and to test the hypotheses, three statistical approaches were adopted.

The first statistical approach was to describe the distribution of young adult migrant groups in Lesotho through univariate analysis. Frequency tables and cross-tabulations were employed in order to identify the distribution of young adult migrants according to demographic, socio-economic, sexual practices and STIs.

The second statistical approach was the bivariate analysis which tested the association between migration, gender, demographic variables, socioeconomic variables, sexual practice variables and STIs. As all the variables were categorical, the Chi-square test of analysis was used to test for association. The output of this statistical step provided information on the second and third objectives of this study and also tested the hypothesis on Gender and STIs.

After establishing the variables statistically associated with STIs, multivariate analysis was done. As the outcome variable STIs is a binary outcome, the logistic regression model was used. Multivariate analysis was done using the Logistic regression stepwise method of

forward selection; four models were included to test for the nature of the relationship between independent and dependent characteristics.

STI prevalence equation

Number of existing cases who have had a STI/ Total population

Sum of existing cases of males and females who have had a STI/Total population

Step 1

Males = 61/6,257 Females = 189/6,257

= 0.0097 = 0.0302

Step 2

STI Prevalence = 0.0399/6,257

= 6.38

Logistic regression equation takes the following notations

Model: $y_i = Ŭ + ɓ_1X_{1i} + ɓ_{2i}X_{2i} + é + ɓ_kX_{ki}$

Where y_i = Dependent Variable (STIs)

$Ŭ_=$ Constant

$ɓ_k$= Regression coefficients

X = Independent Variables (Demographic, Socioeconomic and healthy sexual practices)

3.9 Conclusion

With the statistical methods mentioned above, the report proceeded to address the second objective (which was to describe the relationship between migration and STIs among young adult migrant groups in Lesotho) and the third objective (to understand the association between gender and STIs among young adult migrants in Lesotho), as well as to test the two sets of hypotheses.

Chapter Four

Findings

4.1 Introduction

This chapter shows the distribution of young adult migrants in Lesotho and the results from the bivariate analyses done on the 2009 LDHS data for Migration, Gender and STIs among young adults in Lesotho. For each descriptive analysis done, the tables are separated according to demographic, socioeconomic and sexual practices.

Table 4.1 Distribution of young adults in Lesotho by Migration status and STIs

Variables	Percentage (%)	Frequency (N)
Migration status		
Rural non-migrant	29.74	1,865
Rural-rural migrants	19.6	1,229
Rural-urban migrants	3.65	229
Urban-urban migrants	6.75	423
Urban-rural migrants	5.07	318
Urban-non migrants	35.18	2,206
Total	100	6,270
STIs		
No	96	6,007
Yes	4	250
Total	100	6,257

4.1.1 The distribution of young adult migrant groups in Lesotho

Table 4.1 indicates that out of a sample size of 6, 270 young adult migrants, most young adults were Urban-non migrants (35.18%), and 29.74% were Rural non-migrants. Migration mostly occurred between rural areas at 19.6%, followed by migration between urban areas at 6.75%. Between urban and rural areas migration occurred at 5.07% and migration between rural and urban areas occurred at 3.65%. The table also showed that out of a sample size of 6, 257, 96% of young adults had not had any STI and 4% of young adults had had any STI, in Lesotho.

Table 4.2 Distribution of young adults in Lesotho by demographic characteristics

Variables	Percentage (%)	Frequency (N)
Gender		
Male	25.87	1,622
Female	74.13	4,648
Total	100	6,270
Age groups		
15-19	15.41	966
20-24	27.7	1,737
25-29	23.22	1,456
30-34	18.76	1,176
35-39	14.91	935
Total	100	6,270
Marital status		
Never married	32.55	2,041
Currently married	58.44	3,664
Formerly married	9.01	565
Total	100	6,270
Cohabitation		
Living with Partner	61.74	2,262
Staying elsewhere	38.26	1,402
Total	100	3,664

The demographics of Lesotho from Table 4.2 indicate that out of 6, 270 young adults, there were more females (74.13%) than males (25.87%) in Lesotho. Table 4.2 also shows that out of the same sample size, the age structure in Lesotho consisted mainly of young adults aged 20-24 (27.7%), followed by those aged 25-29 at 23.22%.

The variable marital status shows that 58.44% of young adults were currently married, followed by 32.55% who had never married and 9.01% were formerly married. Regarding cohabitation, out of a sample size of 3,664, the majority of young adults (61.74%) were living with their partner and 38.26% were not staying with their partner.

Table 4.3 Distribution of young adults in Lesotho by socio-economic characteristics

Variables	Percentage (%)	Frequency (N)
Type of residence		
Urban	25.73	1,613
Rural	74.27	4,657
Total	100	6,270
Previous residence		
Urban	25.91	1,059
Rural	74.09	3,028
Total	100	4,087
Educational level		
No education	4.29	269
Primary	48.68	3,052
Secondary	41.47	2,600
Higher	5.57	349
Total	100	6,270
Wealth index		
Poor	38.69	2,426
Middle	18.79	1,178
Rich	42.52	2,666
Total	100	6,270
Occupation		
White collar	36.47	1,217
Blue collar	63.53	2,120
Total	100	3,337

Table 4.3 shows the socio-economic characteristics of young adults in Lesotho. In respect to type of residence the majority, 74.27%, of young adults were currently residing in a rural area while 25.73% were currently residing in an urban area. The table also shows that 74.09% of young adults previously lived in rural parts of Lesotho and 25.91% previously lived in urban areas of Lesotho.

The highest level of education for most, 48.61%, is a primary education, followed by secondary education at 41.47%. The wealth index of young adults clusters in the rich

(42.52%) and poor (38.69%) categories. According to occupation, 63.53% are in blue collar[1] jobs and 36.47% are in white collar[2] jobs.

Table 4.4 The distribution of young adults in Lesotho by Sexual practices

Variables	Percentage (%)	Frequency (N)
Age at first intercourse		
15-20	84.91	5,324
21-26	14.24	893
27-37	0.85	53
Total	100	6,270
Condom use		
No	59.73	3,260
Yes	40.27	2,198
Total	100	5,458
Sought STI medical advice		
No	94.87	870
Yes	5.13	47
Total	100	917

Table 4.4 shows that the majority, 84.91%, of young adults in Lesotho were aged 15-20 when they first had sexual intercourse. Regarding condom use, 59.73% of young adults did not use a condom during their last sexual intercourse and 40.27% had used a condom during their last sexual intercourse. In terms of seeking STI medical advice, the majority of young adults (94.87%) did not sought medical advice on STIs and 5.13% did sought medical advice on STIs.

The Tables from the univariate analysis provided informative information on the distribution of young adults in Lesotho according to migration status, demographics, socio-economic status sexual practices and STIs. Table 4.1 showed that 4% of young adults had had any STI and that most (35.18%) were urban non-migrants. The socioeconomic characteristics, captured in Table 4.3, indicated that 74.27% of young adults were currently residing in a rural type of residence and that 74.09% previously resided in a rural part of Lesotho. Table 4.1 also showed that of those who were migrants, migration for young adults in Lesotho mostly occurred across rural areas, rural-rural migration (19.6%).

[1] Semi-skilled or un-skilled workers

[2] Skilled workers through training and educational attainment

According to the demographic characteristics presented in Table 4.2, it was noted that most, 74.13%, of the young adult population in Lesotho were female, and that most young adults, 27.7%, were in the age bracket 20-24. Table 4.2 also showed that 58.44% of young adults were currently married. Table 4.3 illustrated that 63.53% of young adults were in blue collar jobs. In Table 4.4 it was noted that 40.27% used condoms at last sexual intercourse, and 5.13% of young adults had sought medical advice on an STI.

4.2 Bivariate analysis

4.2.1 Introduction

In order to investigate the association between migration status, gender, demographics, socio-economics and sexual practices and STIs, bivariate analysis were done using the Chi-square test.

4.2.2 Bivariate analysis findings

Table 4.5 The association between Migration and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-Value**
Migration status						
Rural non-migrants	96.89	1,804	3.11	58	1,862 (N) 100 (%)	
Rural-rural migrants	95.6	1,172	4.4	54	1,226 (N) 100(%)	
Rural-urban migrants	96.51	221	3.49	8	229 (N) 100 (%)	
Urban-urban migrants	95.74	405	4.26	18	423 (N) 100 (%)	
Urban-rural migrants	96.53	306	3.47	11	317 (N) 100 (%)	
Urban-non migrants	95.41	2,099	4.59	101	2,200 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	0.237

*Note: Chi-square analysis specifically refers to those who responded yes to having had any STI in the past 12 months of the LDHS.

Table 4.5 shows that there was an insignificant (p=0.237) association between migration status and STIs. The highest (4.59%), levels of STIs were found amongst young adults who were urban-non migrants, lowest (3.11%) were among rural-non migrants. In terms of migration those who migrated between rural areas were found to have the highest (4.4%) level of STIs and those who migrated between urban and rural areas had the lowest (3.47%) levels of STIs.

Table 4.6 The association between Gender and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Gender						
Male	96.23	1,558	3.77	61	1,619 (N) 100 (%)	
Female	95.92	4,449	4.08	189	4,638 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	0.587

*Note, general STI prevalence (6.38%) calculated from Table 4.6

Table 4.6 shows that there was an insignificant (p=0.587) association between gender and STIs among young adults in Lesotho. Although the association was insignificant, female young adults had higher (4.08%) levels of STIs than their male counterparts (3.77%).

Table 4.7 The association between Age groups and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Age groups						
15-19	99.07	956	0.93	9	965 (N) 100 (%)	
20-24	96.89	1,682	3.11	54	1,736 (N) 100 (%)	
25-29	94.97	1,377	5.03	73	1,450 (N) 100 (%)	
30-34	94.2	1,105	5.8	68	1,173 (N) 100 (%)	
35-39	95.07	887	4.93	46	933 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	<0.001

Table 4.7 shows that there was a significant ($p<0.001$) association between age groups and STIs. The highest (5.8%) levels of STIs were among young adults aged 30-34 and the lowest (0.93%) were among young adults aged 15-19.

Table 4.8 The association between Marital status and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Marital status						
Never married	97.99	1,995	2.01	41	2,036 (N) 100 (%)	
Currently married	95.16	3,480	4.84	177	3,657 (N) 100 (%)	
Formerly married	94.33	532	5.67	32	564 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	<0.001

Table 4.8 shows that there was a significant ($p<0.001$) association between marital status and STIs. Young adults who were formerly married had the highest (5.67%) level of STIs while those who had never married had the lowest (2.01%) levels of STIs.

Table 4.9 The association between Cohabitation and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Cohabitation						
Living with partner	94.6	2,138	5.4	122	2,260 (N) 100 (%)	
Staying elsewhere	96.06	1,342	3.94	55	1,397 (N) 100 (%)	
Total	95.16	3,480	4.84	177	3,657 (N) 100 (%)	0.045

Table 4.9 shows that there was a significant ($p<0.05$) association between cohabitation and STIs. Young adults living with their partners had higher (5.4%) levels of STIs in comparison to young adults who did not stay with their partners (3.94%).

Table 4.10 The association between Type of residence and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-Value**
Type of residence						
Urban	95.28	1,534	4.72	76	1,610 (N) 100 (%)	
Rural	96.26	174	3.74	174	4,647 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	0.085

Table 4.10 shows that there was an insignificant ($p=0.085$) association between type of residence and STIs. However, among young adults who resided in urban areas had 4.72% STIs in comparison to young adults who resided in rural areas, who had 3.74% STIs.

Table 4.11 The association between Previous residence and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Previous residence						
Urban	94.79	1,001	5.21	55	1,056 (N) 100 (%)	
Rural	95.83	2,896	4.17	126	3,022 (N) 100 (%)	
Total	95.56	3,897	4.44	181	4,078 (N) 100 (%)	0.158

Table 4.11 shows that there was an insignificant (p=0.158) association between previous residence and STIs. Nevertheless, the table shows that young adults whose previous residence was urban had higher (5.21%) levels of STIs in comparison to those whose previous residence was rural (4.17%).

Table 4.12 The association between Educational level and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Educational level						
No education	96.65	260	3.35	9	269 (N) 100 (%)	
Primary	96.32	2,934	3.68	112	3,046 (N) 100 (%)	
Secondary	95.65	2,482	4.35	113	2,595 (N) 100 (%)	
Higher	95.39	331	4.61	16	347 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	0.509

Table 4.12 shows that there was an insignificant (p=0.509) association between educational level and STIs. However, the table shows that young adults with a higher education had higher (4.61%) levels of STIs and those with no education had the lowest (3.35%) levels of STIs.

Table 4.13 The association between Wealth index and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Wealth index						
Poor	97.07	2,351	2.93	71	2,422 (N) 100 (%)	
Middle	95.5	1,124	4.5	53	1,177 (N) 100 (%)	
Rich	95.26	2,532	4.74	126	2,658 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	0.003

Table 4.13 shows that there is a significant ($p<0.05$) association between wealth index and STIs. Young adults in the rich category had higher (4.74%) levels of STIs and those in the poor category had the lower (2.93%) levels of STIs.

Table 4.14 The association between Occupation and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Occupation						
White collar	93.9	1,140	6.1	74	1,214 (N) 100 (%)	
Blue collar	95.22	2,014	4.78	101	2,115 (N) 100 (%)	
Total	94.74	3,154	5.26	175	3,329 (N) 100 (%)	0.1

Table 4.14 shows that there was an insignificant ($p=0.1$) association between occupation and STIs. Nonetheless, the table shows that young adults with white collar jobs had higher (6.1%) levels of STIs in comparison to those who had blue collar jobs (4.78%).

Table 4.15 The association between Age at first intercourse and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-Value**
Age at first intercourse						
15-20	95.97	5,099	4.03	214	5,313 (N) 100 (%)	
21-26	96.41	859	3.59	32	891 (N) 100 (%)	
27-37	92.45	49	7.55	4	53 (N) 100 (%)	
Total	96	6,007	4	250	6,257 (N) 100 (%)	0.344

Table 4.15 shows that there is an insignificant (p=0.344) association between age at first sexual intercourse and STIs. Although the association is insignificant the table still shows higher (7.55%) levels of STIs among young adults who had their first sexual intercourse in the age bracket 27-37 in comparison to those who had their first sexual intercourse in the age brackets 21-26 (3.59%).

Table 4.16 The association between Condom use and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Condom use						
No	95.85	3,116	4.15	135	3,251 (N) 100 (%)	
Yes	95.54	2,097	4.46	98	2,195 (N) 100 (%)	
Total	95.72	5,213	4.28	233	5,446 (N) 100 (%)	0.577

Table 4.16 shows that there is an insignificant (p=0.577) association between condom use at last sexual intercourse and STIs. Nonetheless the table shows that young adults who responded yes to using a condom at their last sexual intercourse had higher (4.46%) levels of STIs in comparison to those who responded no (4.15%).

Table 4.17 The association between Seeking STI medical advice and STIs

	Outcome Variable STI					
	No		Yes			
Explanatory variable	**Percentage (%)**	**Frequency (N)**	**Percentage (%)**	**Frequency (N)**	**Total**	**P-value**
Sought STI medical advice						
No	73.7	639	26.3	228	867 (N) 100 (%)	
Yes	52.17	24	47.83	22	46 (N) 100 (%)	
Total	72.62	663	27.38	250	913 (N) 100 (%)	0.001

Table 4.17 shows that there is a significant ($p<0.001$) association between seeking medical advice on any STI and STIs. The table shows that of young adults who sought medical advice 47.83% had STIs while those who did not seek medical advice 26.3% had STIs.

4.3 Conclusion

Results showed that 4.08% of female young adults had had any STI, in comparison to young adult males (3.77%). The majority of young adults in Lesotho were urban non-migrants (35.18%), and the commonest migration trend among young adults occurred between rural areas at 19.6%. Females constituted 74.13% of the population, and the population were young, reflecting the age and sex structure.

Table 4.5 found a statistically insignificant association between migration and STIs ($p=0.237$). However it also showed that urban non-migrants had the highest percentage (4.59%) of STIs as well as rural-rural migrants at 4.4%. And there was a significant ($p<0.001$) association between age groups and STIs, as shown in table 4.7, young adults aged 30-34 had higher (5.8%) levels of STIs. The report will proceed to examine the relationship between variables which had a significant association with STIs and the key explanatory variables, migration and gender.

Chapter Five

Multivariate analysis

5.1 Introduction

This chapter focuses primarily on migration, gender, and the variables which were found to have a statistically significant association with STIs from the bivariate analysis. Odds ratios will be reported to measure the quantity of the relationship between the variables and STIs. Significance of association was determined by the p-value set at $p<0.05$. The aim of this chapter is to establish the effect of migration, gender, demographics, socioeconomic factors and sexual practices of young adults in Lesotho on STIs when adjusting for confounders.

Model 1 examines the relationship between migration and STIs, while holding all other variables constant. Model 2 examines the relationship between migration, gender and STIs, while holding all other variables constant. Model 3 examines the relationship between migration, gender, age groups, marital status and STIs, while holding all other variables constant. And model 4, which is the adjusted model, examines the combined relationship of all the characteristics, including wealth index and seeking STI medical advice, with STIs among young adult migrant groups in Lesotho.

Table 5.1 Multivariate Results for STIs among young adults in Lesotho: Model 1 and 2

	Model 1			Model 2	
	Odds Ratio	P-value		Odds Ratio	P-value
Explanatory variables					
Migration status					
Rural non-migrants	1.00	-		1.00	-
Rural-rural migrants	1.43	0.062		1.44	0.65
Rural-urban migrants	1.13	0.757		1.13	0.747
Urban-urban migrants	1.38	0.24		1.39	0.237
Urban-rural migrants	1.12	0.739		1.12	0.736
Urban-non migrants	**1.5	0.016		**1.5	0.018
Gender					
Male				1	
Female				0.98	0.89

***P<0.001, **P<0.05,*P<0.01

5.2 Results from Multivariate Models 1 and 2

Table 5.1 shows models 1 and 2, which assess the relationship between migration status, gender and STIs among young adults in Lesotho. Model 1 shows a significant ($p<0.05$) relationship between urban-non migrants and STIs. The table indicates that young adult urban-non-migrants had 1.5 increased odds of having had any STI in comparison to rural-non migrants.

Model 2 also shows a statistically significant ($p<0.05$) relationship between urban-non migrants and STIs. Young adult, urban-non migrants still had 1.5 increased odds of having had any STI in comparison to young adults who were rural non-migrants. Model 2 also shows that there is an insignificant ($p=0.89$) relationship between gender and STIs. Although there was an insignificant relationship between gender and STIs, the model also shows that being female was 2% protective against having had any STIs in comparison to being male.

Table 5.2 Multivariate Results for STIs among young adults in Lesotho: Model 3 and 4

	Model 3			Model 4	
	Odds Ratio	P-value		Odds Ratio	P-value
Explanatory variables					
Migration status					
Rural non-migrants	1.00	-		1.00	-
Rural-rural migrants	1.02	0.94		0.91	0.695
Rural-urban migrants	0.86	0.704		0.59	0.255
Urban-urban migrants	1.23	0.462		0.96	0.912
Urban-rural migrants	1.17	0.647		1.19	0.69
Urban-non migrants	1.36	0.078		1.06	0.775
Gender					
Male	1.00	-		1.00	-
Female	0.91	0.582		0.84	0.365
Age groups					
15-19	1.00	-		1.00	-
20-24	***2.91	0.004		***3.39	0.002
25-29	***4.5	<0.001		***4.96	<0.001
30-34	***4.99	<0.001		***6.47	<0.001
35-39	***4.19	<0.001		***5.01	<0.001
Marital status					
Never married	1.00	-		1.00	-
Currently married	***1.75	0.004		1.68	0.23
Formerly married	**1.89	0.015		1.6	0.136
Wealth index					
Poor				1.00	-
Middle				1.91	0.003
Rich				***2.04	<0.001
Sought STI medical advice					
No				1.00	-
Yes				**2.06	0.025

***P<0.001,**P<0.05,*P<0.01

5.3 Results from the Multivariate models 3 and 4

Table 5.2 shows Models 3 and 4 which control for migration status, gender, age groups, marital status, wealth index and seeking medical advice on STIs, in order to establish the relationship between these variables and STIs among young adults in Lesotho.

After including demographic characteristics, Model 3 shows an insignificant (p=0.078) relationship between migration status and STIs. The model also shows a reduced odds of having had any STI (1.36, p=0.078) among urban-non migrant young adults. It also shows that being a rural-urban migrant is 14% (p=0.704) protective against having had any STI among young adults in Lesotho. Gender still remained insignificant (p=0.582) in model three, however being female became more protective against having had any STI at 9%. In respect to age groups, young adults aged 30-34 had the highest increased odds of having had any STI (OR=4.99, p<0.001), in comparison to young adults aged 15-19. And young adults aged 20-24 had an increased odds of having had any STI (OR=2.91, p<0.05) in comparison to young adults aged 15-19. In terms of marital status, model 3 shows that young adults who were formerly married had a 1.89, (p<0.05), increased odds of having had any STI in comparison to those who were never married.

Model 4 shows that after considering all variables, urban-rural migrants have the highest increased odds of having had any STI (OR=1.19, p=0.69) in comparison to rural non-migrants. And being a rural-urban migrant is 41% (p=0.255) protective against having had any STIs in comparison to being a rural non-migrant. And being female becomes more protective against having had any STI at 16% (p=0.365). In terms of age groups the odds of having had any STI among young adults aged 30-34 increased to 6.47 (p<0.001) in comparison to those aged 15-19. The same occurred with young adults aged 20-24, where the odds of having had any STI increased to 3.39 (p<0.05) in comparison to young adults aged 15-19. Model 4 also shows that after including all variables young adults who are currently married have an increased (OR=1.68, p=0.23) odds of having had any STI in comparison to those who were never married.

Regarding wealth index young adults in the rich category had a 2.04 (p<0.001) increased odds of having had any STI in comparison to young adults in the poor category. And regards to seeking medical advice on STIs, young adults who sought medical advice had a 2.06

($p<0.05$) increased odds of having had any STI in comparison to those who did not sought medical advice.

5.4 Testing the hypothesis

With reference to model 4, regarding migration status and STIs, the null hypothesis was accepted with p-value set at 0.05, after adjusting for confounders. And for gender and STIs in the same model, the null hypothesis was accepted with p-value set at 0.05 after adjusting for confounders.

5.5 Conclusion

The acceptance of the null hypothesis for both hypotheses, suggests that the relationship between migration, gender and STIs among young adults in Lesotho is broad and multifaceted. In addition to migrant status and gender factors such as access to health care, age, marital status and wealth index also need to be taken into consideration in this discourse. Though migration did not have a significant relationship with STIs in model 4, a key finding from the model is that urban-rural migrants had the highest (OR=1.19, p=0.69) odds of having had any STI in comparison to rural-non migrants.

Chapter Six

Discussion

6.1 Introduction

This research report was aimed at examining the influence of migration and gender on STIs among young adult migrant groups in Lesotho. The more specific objectives were to understand the historical trans-boundary relationship between Lesotho and South Africa, and how this relationship contributed to STIs in Lesotho. The second objective was to describe STIs among young adult migrant groups, and the third objective was to understand the association between gender and STIs among young adults in Lesotho.

The report found that while there is no association and relationship between migration and STIs, however there is a 1.19 increased odds of having had any STI among urban-rural migrants in comparison to rural-non migrants. And in regards to gender, although there was no significant association and relationship with STIs, being female was found to be 16% protective against having had any STI in comparison to being male. These findings indicate a gap in studies, which mostly speak to an association and relationship between migration and STIs. On the other hand, it is consistent with literature and empirical findings; that also found that there is a difference in having had any STI levels among migrant and non-migrant young adults as well as according to gender.

6.2 Migration, Gender and STIs amongst young adults in Lesotho

Table 5.2 (Model 4) showed that young adults in Lesotho aged 30-34 had an increased (6.47) odds of having had any STI. This provides a more specific indication of which age group, among young adult migrants in Lesotho, have the highest STIs. It also correlates with findings from other studies on migration and STIs. Young adults in Lesotho aged 15-30 years had the highest STIs (Khobotlo *et al*, 2009). In Kwa-Zulu Natal, South Africa, several national household surveys reported very high STIs of 12% among men and 20% among women aged 15-49 years in 2005. In another study by Welz *et al*, (2007), higher levels of STIs were found among those aged 14-24, men at 5% and 16% among women (Welz, *et al*, 2007). Though the studies show a variation in STIs according to age among young adults, they confirmed that the age group which experienced higher STIs were young adults.

This report also confirms that there is a difference in STIs among female and male young adult migrant groups in Lesotho. Though the report did not find a significant association between gender and STIs, Table 4.6 shows that out of a 6.38%, general STI prevalence, female migrants had higher (4.08%) levels of STIs than their male counterparts (3.77%). An interesting finding in Table 5.2 Model 4 was that being female was 16% protective against having had any STI in comparison to being male. Model 4 also showed that respondents who were currently married had an increased (OR=1.68, p=0.23) odds of having had any STI, in comparison to those who were never married. The reduced chance of STIs among female young adult migrants, as seen in model 4, could be explained by the cultural norms around womenôs sexual behaviour. Studies suggest that women may, in fact, adopt an even more cautious attitude towards sexual behaviour as a migrant.

From a cultural perspective, women were often expected to maintain standards of purity and honour in relation to their husband and family (Wodi, 2005). This suggests that these values are reflected by an essentially patriarchal system as womenôs sexual behaviour is dictated by male values. It is considered culturally assertive behaviour for men to have sex on demand, which includes using force in a romantic relationship (Wodi, 2005). Women on the other hand, were granted no cultural incentive for having sex on demand. Ultimately, this reduced their chances of engaging in risky sexual behaviour while away from their partners. Nevertheless, women in SSA experience risky sexual behaviour due to patriarchal dominance. A study by Wilson *et al*, (2009) found that levels of condom use among men and women were at 57% and 48% respectively. The practice of condom use is influenced by a wide range of factors, one of those being partner attitudes. Thus, the patterns of behaviour rooted in gender cultures, especially in less industrialised societies, become significant in high levels of STIs (Wodi, 2005).

In addition to cultural norms, literature attributes the economic disparities between females and males to cause higher levels of STIs among women. Despite the fact that many women have displaced young men as primary wage earners, there was still a large difference in salary between miners and female garment workers (Chaka, 2011). In 2002, miners earned an average of two thousand nine hundred Maluti[3] (M2, 900) per month while garment workers earned six hundred and fifty Maluti (M650) (Chaka, 2011). This finding is similar to Crushôs

[3] Lesotho's currency

(2010), who found that women were paid a third of what men were paid. This report found that there was a significant relationship between wealth index and STIs.

Model 4 showed that young adult migrants in the rich wealth index category had a (OR=2.04, p<0.001) increased STI odds ratio in comparison to those in the poor category. Taking into consideration those male migrants who had significantly higher earnings than female migrants, the disparities in wealth index suggest that male migrants were more prone to risky sexual behaviour as a result of cultural and behavioural norms. Although being female was found to be protective, what render female migrants vulnerable to STIs are the socio-economic disparities between female and male migrants.

UNFPA (2010), acknowledged that female migrants who frequently end up in low-status, low-wage production and service jobs were often exposed to sexual violence and STIs as a result of this socio-economic status (UNFPA, 2010). A study in Kenya, Nairobi, found that the lack of formal employment for women, and the social disruption resulting from the large number of migrants, resulted in commercial sex work to an extent not known before (Voeten *et al*, 2004). As a result of this, STIs started to spread rapidly within and between urban centres, through mobile ñcore groupsò such as truck drivers and commercial sex workers, along main trucking routes (Voeten *et al*, 2004). This finding is linked to Whiteôs (2003) hypothesis, which states that ñIf mobility causes increased risky sexual behaviours, then increased mobility rates will increase the endemicò. Sex workers were found to be highly mobile as they frequently moved so that they were not identified in their own villages or cities. Additionally, sex workers usually interacted with other highly mobile, migrant workers such as miners, construction workers and truck drivers. This makes sex workers a key group in understanding the influence of migration on STIs among young adults (IOM, 2004).

Model 4 also showed that of young migrant adults in Lesotho who sought medical advice on STIs, had a (OR=2.06, p<0.05) increased odds of having had any STI in comparison to those who did not sought any medical advice on a STI. Lurie *et al*, (2003) found that the treatment of the presence of symptomatic STIs is therefore more likely to confer some protection against HIV infection. However, treatment of STIs among migrant groups and preventing the spread of STIs is difficult, particularly among migrant groups such as truck drivers and commercial sex workers that are highly mobile. As a result, most health and demographic surveillance systems (HDSS) have treated departures as loss-to-follow-up (LTFU) (White,

2009). For these reasons, migrant networks are an important aspect in research pertaining to migration and STIs.

Through the networks formed, migrant populations convey information, offer financial assistance, facilitate employment and accommodation and provide various forms of support (Arango, 2000). Migrant networks can thus have many positive aspects. Considering the prominence of social networks of this kind, it is likely to be an important mechanism through which individuals in the Southern African region learn about STIs (Kohler *et al*, 2007).

Chapter Seven

Conclusion and Recommendations

7.1 Conclusion

With circular migration still being a large component for livelihood and economic development among the Basotho people, it is important to aptly identify the causal links between migration and STIs amongst this population group. After multivariate analyses, age groups, wealth index and seeking medical advice on STIs, were found to have significant relationships with STIs among young adults from Lesotho.

These findings indicate that further studies need to look into factors which are barriers to healthcare access, and into perceptions of young adult Basotho migrants towards healthcare services, to understand whether they believe in traditional doctors or the biomedical approach. The wealth index highlights the wealth inequalities in Lesotho and how these are related to certain health outcomes such as STIs, which this report found to be a burden on mostly females. In this regard, it is significant that studies surrounding sexual behaviour take into consideration factors such as social and cultural norms.

The report also found that the demographic and socioeconomic variables which were related to STIs were gendered because of cultural norms, pertaining to the roles of women. An example can be seen in multiple sexual partnerships being a way of life in Lesotho (Khobotlo *et al*, 2009), and Basotho women believing that men had the right to refuse, condom use (Jana *et al,* 2010). With women being unable to make decisions around condom use, this increases their chances of STIs. Furthermore, Wodi (2005) found that women were more likely to delay healthcare due to lack of money.

7.2 Recommendations

Among the aims and objectives of the Millennium Development Goals (MDGs), are promoting gender equality and reducing high STI rates (UNFPA, 2004). It is important to conduct on-going studies into the causal links between migration and STIs with a broad approach which focuses on various factors related to migration, gender and STIs.

Further and more detailed studies also need to be conducted on migrant social networks and sexual webs in order to ascertain how they enhance risky sexual behaviours in order to establish feasible prevention methods for these population groups. In addition to feasibility, migrant social networks could be a viable source in creating more awareness to prevention methods as well as disseminating information on access to such methods.

More generally, studies pertaining to STIs also need to continue to explore the various factors which enhance high STI rates. Both Biomedical and Social Scientific approaches need to be employed to address this issue, as they are central to the understanding of the high epidemic in SSA, more so in Southern Africa.

From a public health perspective, intervention programmes and access to healthcare need to continue and to spread across different demographics. As this study has revealed, medical counselling and treatment minimise the spread of STIs.

7.3 Limitations

The main limitation to this report is the inability to directly identify migration characteristics from the questionnaires. Due to this limitation, results from the report may be sensitive to alternative definitions of migration status that could be derived from direct and more detailed migration histories.

As the study is based on data collected from survey, questionnaires, the information on STIs are prone to recall bias as well as what is deemed to be socially appropriate responses.

A shortcoming of cross-sectional studies is that of temporality. A clear sequence of events cannot be distinguished, making it difficult to establish whether a respondent migrated and subsequently experienced an STI, or vice versa.

Lastly, a survey of this kind is by nature limited as it cannot exhaustively explore the complexity of social and cultural behaviour.

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Appendix

Map of Southern Africa.